

REMARKS

This Amendment is submitted in response to the Official Letter dated June 28, 2005. Claims 1, 15 and 18 have been amended. Claim 17 has been cancelled. New claims 23 through 25 have been added. The application now includes claims 1 through 16 and 18 through 25, with claims 1 and 15 being independent claims.

The specification has been amended to correct a minor typographical error. Claim 1 has been amended to correct an inadvertent typographic error. The claim now recites that the lateral field generated by the electrodes induces a transverse shear mode acoustic wave within the substrate, as described in paragraph 42 of the specification. Claim 15 has been amended to recite a method for fabricating an acoustic wave sensor having the structure recited in claim 1. Claim 18 also has been amended to correct an inadvertent typographical error. New claims 23 through 25 are dependent upon amended claim 15 and recite limitations that have been deleted from claim 15. Therefore, the amended specification paragraph and claims and the new claims introduce no new matter. Accordingly, applicant respectfully requests that the Examiner enter the amended specification paragraph and claims and the new claims.

In the Official Letter, the Examiner stated that claims 1 through 22 are subject to restriction to one of the following inventions under 35 U.S.C. §121:

- I. claims 1 through 14 and 18 through 22, drawn to an acoustic wave sensor, classified in class 310, subclass 333; and
- II. claims 15 through 17, drawn to a method of making an acoustic wave sensor, classified in class 29, subclass 25.35.

The Examiner also stated that the inventions are related as process of making and product made and that the inventions are distinct if either or both of the following can be shown:

- (1) that the process as claimed can be used to make other and materially different product, or

(2) that the product as claimed can be made by another and materially different process.

The Examiner concluded that the inventions were distinct since the method of making can be used to make a materially different product such as a chemical sensor, a motor structure or a transducer. The Examiner then requested that applicant elect one of the inventions for examination.

It will be noted that applicant has cancelled method claim 17 and added new method claims 23 through 25. Accordingly, the following remarks consider the description of Invention II to be as follows:

II. claims 15, 16 and 23 through 25, drawn to a method of making an acoustic wave sensor, classified in class 29, subclass 25.35.

Applicant hereby elects, with traverse, Invention I with claims 1 through 14 and 18 through 22, drawn to an acoustics wave sensor.

Applicant has amended independent method claim 15 to recite a method for fabricating an acoustic wave sensor comprising the steps of providing a piezoelectric crystal and then forming the crystal into a substrate having a structure as recited in independent sensor claim 1. Amended method claim 15 further recites depositing upon the substrate a pair of electrodes having the structure of electrodes as recited in independent sensor claim 1. Accordingly, amended claim 15 recites a method for fabricating an acoustic wave sensor having the structure recited in claim 1. Hence the process of fabrication recited in amended claim 15 produces a sensor having the structure recited in claim 1.

As described above, the Examiner stated that the method recited in claim 15 may be utilized to make a materially different product. One example of a different product cited by the Examiner is a chemical sensor. However, as clearly stated in paragraph 61 of the specification:

Thus, the sensor 100 may be used to detect the presence of a specific compound within either a gas or a liquid.

Because acoustic sensors may be used as chemical sensors, either the product having the structure recited in claim 1 or the device fabricated by the steps recited in amended claim 15 may be utilized as a chemical sensor. Therefore, with regard to chemical sensors, the method of making recited in amended claim 15 does not actually result in a materially different product from the product recited in claim 1.

Another example of a different product that may be made by the method recited in amended claim 15 cited by the Examiner is a motor structure. However, it is well known that a motor converts electrical energy into rotational energy. Neither claim 1 nor amended claim 15 recites a rotating element. Additionally the preambles of both claims clearly recite an acoustic wave sensor. Therefore, applicant believes that amended claim 15 can not be construed to recite a method for fabricating a motor structure and the Examiner's example is not applicable.

Finally, the Examiner cited a transducer as an example of a different device that may be fabricated by the method recited in amended claim 15. However, as recited in amended claim 15, the acoustic wave sensor is operative to generate a lateral electrical field that induces transverse shear mode acoustic waves. Indeed, an acoustic wave sensor, *by its very nature*, is a transducer that converts electrical energy into mechanical energy. Therefore, because an acoustic wave sensor is a transducer, stating that the method recited in amended claim 15 can be used to fabricate a transducer is non-conclusive with regard to demonstrating that the method may be used to make a materially different product.

Based upon the above remarks, applicant does not believe that the inventions I and II are distinct. Accordingly, applicant respectfully requests that the Examiner withdraw his restriction requirement and examine claims 1 through 25.

In view of the amendments and above remarks, it is believed that the application is in condition for substantive examination.